www.hp.com/go/pcaccessories

ORINOCO™ Mobility
by

**Lucent Technologies**

**hp**
wireless LAN
access point

P1981A

installation guide

*hp*
®
i n v e n t

Notice

The information contained in the documents accompanying this product is subject to change without notice.
Hewlett-Packard makes no warranty of any kind with regard to this material, including, but not limited to,
the implied warranties of merchantability and fitness for a particular purpose.
Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in
connection with the furnishing, performance, or use of this material. Hewlett-Packard assumes no
responsibility for the use or reliability of its software on equipment that is not furnished by Hewlett-Packard.
These documents contain proprietary information that is protected by copyright.

# English

# Chapter 1 - Introduction

This chapter introduces you to your HP Wireless LAN Access Point.

## Welcome

The HP Wireless LAN Access Point enables you to create various types of wireless network applications in your office.

Wireless networking is an 'out-of-the-box' mode of operation for the Wireless LAN Access Point. After powering the device, it will forward the data communication from one wireless computer to another. You can easily extend your wireless network by adding more wireless computers.

A wireless network uses radio waves to communicate between wireless computers. The waves can pass through solid objects, like walls. A data encryption feature is used to increase the security of your wireless network.

To create a wireless network you will need:

• An HP Wireless LAN Access Point: To provide wireless data communications between computers, to the Internet, or to a wired Ethernet network
• USB Wireless LAN devices: For each computer you want to connect to the wireless network.

### Supported Operating Systems

The HP Wireless LAN Access Point is compatible with the following operating systems:

• Windows 95
• Windows 98
• Windows 2000
• Windows NT 4.0

### Support

You can find extra documentation for the HP wireless product range on the software CD-ROM supplied with the Wireless LAN Access Point.

For the latest information on the HP wireless range, access the HP web site at:

**www.hp.com/go/briosupport**
**www.hp.com/go/vectrasupport**
**www.hp.com/go/kayaksupport**
**www.hp.com/go/e-pcsupport**

## Kit Contents

Your HP Wireless LAN Access Point kit includes the following items:

• 1 HP Wireless LAN Access Point
• 1 *HP Wireless LAN Access Point Getting Started* guide
• 1 *Installation Software CD-ROM*
• 1 Power adapter
• 1 Telephone cable
• Screws and plugs.

## Network Options

There are multiple ways to set up a wireless network: Internet through your phone, Internet through your cable modem and Wireless to wired network.

- Internet through Your Phone Line
  The Wireless LAN Access Point includes a built-in 56K modem that allows you to share an Internet connection between multiple computers. To use the Wireless LAN Access Point to access the Internet, you must have a traditional phone line, and an account with an Internet Service Provider.
- Internet through Your Cable Modem
  If you have an account with a cable Internet Service Provider and you have a cable modem, you can use the Wireless LAN Access Point to connect your wireless computers to the Internet.
- Wireless to Wired Network
  When connected by the Wireless LAN Access Point, the computers of a wired Ethernet group and the computers of your wireless network can share a printer or any other network device.

*NOTE*  An RG-11 telephone cable for connecting the Wireless LAN Access Point to your phone outlet comes with your kit. While HP have tried to ensure that the supplied cable works in as many countries as possible, you may need to purchase the correct telephone cable for the country where you are using the Wireless LAN Access Point. Ethernet cables for connecting your cable modem are not supplied with your HP Wireless LAN Access Point and must be purchased separately.

## Network Scenarios

Before you begin installing your USB Wireless LAN it is important to consider which kind of wireless network you want to create.

The HP Wireless LAN Access Point allows you to create a variety of wireless networks. For a detailed description of the possible network scenarios, access the HP web site at **www.hp.com/go/pcaccessories**

# Chapter 2 - Hardware Installation

This chapter describes how to install a Wireless LAN network.

## Before You Start

Before beginning a network installation, read the following information:

*CAUTION*    Once you have supplied power to the HP Wireless LAN Access Point, do not cover the device or block the airflow to the device with any other objects. Ensure that the device is not exposed to high temperatures or high levels of humidity.

### Placing Your HP Wireless LAN Access Point

Before beginning network installation, it is recommended that you follow these guidelines:

• Position the device as centrally as possible to the computers that will be in the wireless network

• Place the device next to a power outlet that can be easily reached by the power cord

• If you are planning to connect your Wireless LAN Access Point to a phone line, ensure that the phone outlet is close to the device

• If you are planning to connect external equipment to the Ethernet port of your Wireless LAN Access Point, ensure that the equipment is close to the device.

### Cleaning Your HP Wireless LAN Access Point

To maintain the functionality of your HP Wireless LAN Access Point, always keep the device as clean as possible. The device can be cleaned with a soft tissue. Avoid the use of abrasive cleaning materials or aggressive liquids such as alcohol.

## Removing the Rear Cover

When making cable connections to the HP Wireless LAN Access Point, first remove the rear cover from the device. To remove the cover:

1   Take the front of the device in one hand and the rear cover in your other hand.

2   Press in the release latches on both sides of the rear cover.

3   Pull the unit away from the rear cover until the release latches come out of the rear cover.

4   Lift up the device to disconnect it from the rear cover.

release catches

rear cover                          unit

Write down the ID code of your HP Wireless LAN Access Point. The code later can be found on a small label at the rear of the device. You will need this ID code if you want to make any changes to the settings of your network.
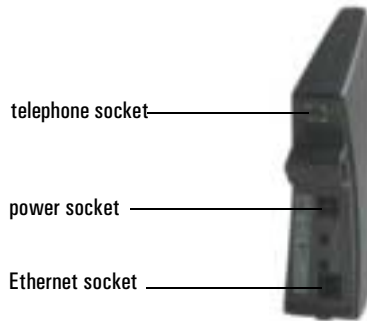
## Connecting the Cables

After removing the rear cover, you will see three cables sockets at the rear of the device.

telephone socket

power socket

Ethernet socket

### Connecting the Power Adapter Cable

To connect the power cable, plug the connector at the end of the power adapter cable into the power socket of the HP Wireless LAN Access Point.

### Connecting a Telephone Cable for Internet through Your Phone Line

If you want to have Internet via your phone line you can use the telephone cable that came with your kit. To connect a telephone cable:

1   Plug one of the connectors on the telephone cable into the telephone socket of the HP Wireless LAN Access Point.

2   Plug the other connector on the telephone cable to your phone outlet.

*NOTE*    **Depending on local standards, you may need a special adapter plug to connect the telephone cable to your outlet.**

If you want Internet via your cable modem, use a 10BaseT crossover cable to make a direct connection between the HP Wireless LAN Access Point and your cable modem.

### Connecting an Ethernet Cable for Internet through Your Cable Modem

If you want Internet via your cable modem, use an Ethernet cable and a 10BaseT crossover cable to make a direct connection between the HP Wireless LAN Access Point and your cable modem.

To connect an Ethernet cable:

1   Plug one of the Ethernet cable connectors into the Ethernet sockets of the HP Wireless LAN Access Point.

2   Plug the other Ethernet cable connector into your cable modem.

*NOTE*    **To connect the HP Wireless LAN Access Point to an Ethernet network, use a standard 10BaseT cable to connect your HP Wireless LAN Access Point to the Ethernet hub and a 10BaseT crossover cable for making a direct connection between the HP Wireless LAN Access Point and a single Ethernet device (not via a hub).**

## Wall Mounting the Wireless LAN Access Point

The information in this section is only applicable if you want to mount the HP Wireless LAN Access Point to the wall.

To mount the Wireless LAN Access Point to the wall:

1 Pierce the three rear screw holes with a sharp pointed object.

2 Decide where and how you want to place the HP Wireless LAN Access Point (you may consider mounting the device upside-down on high spots, to be able to see the LEDs).

3 Place the rear cover against the wall, and put three marks on the wall to indicate the screw positions.

4 Use the screws and the plugs that came with your kit to fix the rear cover to the wall.

rear cover

screw holes

## Attaching the Rear Cover

Once the cables have been successfully connected and the placement decided, you can attach the rear cover to the Wireless LAN Access Point. To attach the rear cover:

1 Bring the device close to the rear cover.

2 Guide the cable(s) coming from the device through the cable entrance of the rear cover.

3 Insert the small hook at the bottom of the unit in the rear cover slot.

4 Turn the unit to the rear cover. Press in both release latches to insert them in the rear cover.

5 Push the rear cover against the unit until the release latches lock into place.

If you want to place the HP Wireless LAN Access Point on a flat surface you have to guide the cable(s) through the cable entrance at the back of the rear cover. By doing this, the device can stand upright.

## Powering the HP Wireless LAN Access Point

There is no On/Off switch on the HP Wireless LAN Access Point. This is because the device uses very little power.

Power LED ————————————

Wireless LED ————

Ethernet LED —

Telephone/Modem LED
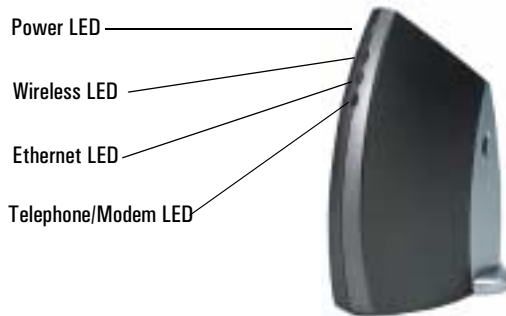
To power-up the device:

1    Plug the power adapter into a power outlet to start the power-up process.

After applying power to the Wireless LAN Access Point, do not cover the device or block the airflow to the device with any other objects.

2    Monitor the LED activity on the device. The LEDs will change color between Yellow, Red and Green. When finished, the Wireless LAN Access Point shows LED activity as listed in the table below.

| Name | Color/Activity | Description |
| --- | --- | --- |
| Power | Steady Green | Power enabled |
| Wireless | Off, or Flashing Green or Red | Wireless activity |
| Ethernet | Off, or Flashing Green or Red | Ethernet activity |
| Telephone/ Modem | Off, or Flashing Green or Red | Modem activity |

*NOTE*    If the HP Wireless LAN Access Point does not switch to normal operation within one minute, try to solve the problem with the troubleshooting information in the online manual on the CD-ROM.

# Chapter 3 - Software Installation and Network Settings

This chapter describes how to install the Wireless LAN Access Point software and set new settings for your network.

## Installing Software

### Choosing Your Computer

Decide on which of your wireless computers you are going to install the software. This computer will be your administrative station and, once the software is installed, it will allow you to change the settings for your wireless network. You can install the software on any computer, as long as it has:

• A USB Wireless LAN connected to your PC

• At least 5MB of free hard disk space

• Microsoft Windows 95, Windows 98 or Windows 2000

• If you are planning to connect external equipment to the Ethernet port of your Wireless LAN Access Point, ensure that the equipment is close to the device.

*NOTE*  Installing the software on more than one computer allows you to change the network settings from more locations. However, it is recommended that you do not install the software on all the computers in your wireless network as it increases the chances of the settings being changed regularly by all members of the wireless network.

### Performing the Installation

Follow these steps to install the software on your computer:

1   Insert the CD-ROM into your CD-drive.
2   Click the **Start** button on the Windows taskbar.
3   Select **Run**.
4   Click the **Browse** button to open the Browse window.
5   Double click on the icon for your CD-ROM drive to see the contents of the CD-ROM.
6   Open the **Software** directory, then select **RG**
7   Double-click the **Setup.exe** file.
8   An install program will start. Follow the instructions on your screen to install the software on your computer.

*NOTE*  If your computer has Autorun enabled, the CD-ROM will start automatically. To install the software select **Install Software** and then **RG Setup** tool.

# Changing the Settings

## Preparation

Before attempting to change the settings, follow these steps:

1. Make sure that all necessary cables are connected to the Wireless LAN Access Point.
2. Make sure that your Wireless LAN Access Point is powered and is operating normally.
3. Make sure that the Wireless USB LAN settings on your wireless computer are correct.

## Running the Utility

Follow these steps to run the setup utility and change the network settings:

1. Click the **Start** button on the Windows taskbar.
2. Select **Programs** and then **Orinoco**.
3. Select the **RG Setup Utility**.
4. Change the settings when required or desired.

*NOTE*    The Wireless LAN Access Point and all USB Wireless LANs in your wireless network, must have the same Encryption Key in order for the devices to transmit and receive readable data. This means that if you change the Encryption Key for the Wireless LAN Access Point, you must update the Encryption Key in the settings on every wireless computer in your wireless network.

# Chapter 4 - Troubleshooting

This chapter demonstrates how to solve any problems with your Wireless LAN Access Point device.

## HP Support

You can get help solving problems with HP accessories from the following HP support Web sites:

**www.hp.com/go/briosupport**
**www.hp.com/go/vectrasupport**
**www.hp.com/go/kayaksupport**
**www.hp.com/go/e-pcsupport**

## Reset and Reload Buttons

### The Reload button

Pressing the Reload button will return the Access Point to its initial configuration. In this state the encryption will be disabled and you will be able to access the Access Point without the Encryption Key.

### The Reset button

Pressing the Reset button will reset the Access Point if it has become frozen.

## Special Modes

The Wireless LAN Access Point has several special modes.

| Occurrence | Action |
|---|---|
| After supplying power to the Access Point | The Access Point will start automatically returns to normal operation within 1 minute |
| After finishing the RG Setup utility | The network settings will be sent from your computer to the Access Point. The Access Point will then restart and automatically return to normal operation within 1 minute |
| After pressing the Reset button | The Access Point will restart and automatically return to normal operation within 1 minute |
| After pressing the Reload button | The Access Point will restart and automatically return to normal operation |

## Troubleshooting Scenarios

Use the following scenarios to solve problems:

### Scenario 1

I can not make a connection between my computer(s), or to the Internet.

1   If the Access Point is in one of the special modes, wait for approximately one minute to allow the Access Point to return to normal operation. Perform a reset if the Access Point does not automatically return from a special mode to normal operation within approximately one minute.

2   Make sure you have set the right values for the following USB Wireless LAN parameters on your wireless computers:

    •Network Name: Enter the Access Point ID

    •Encryption Key: Enter the last 5 digits of the Access Point ID.

Note: The Access Point and all USB Wireless LANs in the wireless network must have the same Encryption Key in order for the devices to transmit and receive readable data. This means that if you changed the Encryption Key with the RG Setup Utility, you have to update the Encryption Key in the USB Wireless LAN settings on every wireless PCs in your network.

3   Use the Access Point LED table or the Access Point Troubleshooting table to find the problem.

### Scenario 2

My network worked fine, but after running the RG Setup utility I can not make a connection between my computer(s), or to the Internet.

1   Make sure to set the right value for the Access Point ID in the RG Setup utility.

2   The Access Point and all USB Wireless LANs in your wireless network, must have the same Encryption Key in order for the devices to transmit and receive readable data. This means that if you changed the Encryption Key for the Access Point in the RG Setup utility, you have to update the Encryption Key on every wireless computer in your network.

3   Use the Access Point LEDs and the Access Point Troubleshooting table to find the problem.

## Scenario 3

I changed the Encryption Key of my Wireless LAN Access Point with the RG Set-up utility. Now I want to update the Encryption Key on my wireless computers, but have forgotten the 5 character Encryption Key code.

1   If you change the Encryption Key on the Access Point, you have to update the Encryption Key on every wireless computer in your network.The Access Point and all wireless computers in your network, must have the same Encryption Key in order for the devices to transmit and receive readable data.

2   If you change the Encryption Key, you are advised to write it down and keep it in a safe place. If you forget the key, you will not be able to update the Encryption Key in the USB Wireless LAN settings on your wireless computers. As a result of that you will also not be able to change the Access Point Encryption Key with the setup utility.

3   There is no other way to solve the problem than to perform a 'reload' on the Access Point. The reload will change the Encryption Key to the default value.

4   After the reload you can run the Access Point RG Set-up utility again, and change the default Encryption Key to a new value. Do not forget to update the Encryption Key in the USB Wireless LAN settings on your wireless computers.

*NOTE*     Whenever you change the Encryption Key, you are advised to write it down and keep it in a safe place.

# LED Activity

| Power LED | Wireless LED | Ethernet LED | Modem LED | Access Point Status | Solution |
|---|---|---|---|---|---|
| Off | Off | Off | Off | No power | Check power cable and power supply |
| Off | On/Flashing | On/Flashing | On/Flashing | Broken | Return Access Point to dealer |
| Green | Off | Off/Flashing Green | Off/Flashing Green | No data received from wireless network | 1. Connect PCs with USB Wireless LAN 2. Reduce distance between USB Wireless LAN |
| Green | Flashing Red | On/Flashing/ Off | On/Flashing/ Off | Impossible to send data to wireless network | 1. Connect PCs with USB Wireless LAN 2. Reduce distance between USB Wireless LAN 3. If in special mode, wait 1 minute |
| Green | Off | On/Flashing/ Off | On/Flashing/ Off | No data received from the Ethernet/wireless network | 1. If in special mode, wait 1 minute 2. Check Ethernet cable is working |
| Green | Off | Flashing Red | On/Flashing/ Off | Impossible to send data to Ethernet/wireless network | 1. If in special mode, wait 1 minute 2. Check Ethernet cable is working |
| Green | Flashing On/Off | Flashing On/Off | Off | No data received from phone line | 1. If in special mode, wait 1 minute 2. Try to set-up an Internet connection 3. Make sure phoneline works correctly |
| Green | On/Off | On/Off | Flashing Red | Impossible to send data to the phoneline | 1. If in special mode, wait 1 minute 2. Make sure the phoneline works correctly |
| Red/Orange | Red/Orange | Red/Orange | Red/Orange | Access Point broken | Return to HP dealer |
| Red | Red | Red | Red | Booting up or crashed | If Access Point has just been powered up it is booting up no action should be taken. If LEDs remain red for a prolonged period the Access Point has crashed and should be reset. |

# Support Part Numbers

| Product | Support Part Number | Description |
|---|---|---|
| P1981A US #ABA: US Wireless LAN Access Point | P1981-63001 | US Wireless LAN Access Point |
| P1981A EUR #ABB: EUR Wireless LAN Access Point | P1981-63002 | EUR Wireless LAN Access Point |
| P1981A UK #ABU: UK Wireless LAN Access Point | P1981-63003 | UK Wireless LAN Access Point |
| P1981A Australia #ABG: Australia Wireless LAN Access Point | P1981-63004 | Australia Wireless LAN Access Point |

# Chapter 5 - Technical Information

## Technical Specifications

| | |
|---|---|
| Wireless Data Rate | up to 11 Mbps |
| WLAN Standard | IEEE 802.11 (standard for High speed and Wi-Fi certified WLAN) |
| Bit Error Rate | better than $10^{-5}$ |
| Frequency band / Channels | 2.4 Ghz.<br>Selectable channels:<br>• Channel A: 2412 MHz<br>• Channel B: 2427 MHz<br>• Channel C: 2442 MHz<br>• Channel D: 2457 MHz |
| Input Voltage | 7 to 15V DC |
| Modem | 56k, V.90, RJ-11 (female) |
| Ethernet | 10Base-T, RJ-45 |
| Wireless | HP Wireless USB LAN |
| Operating Temperature | 0 to $+40\ ^{o}C$ |
| Storage Temperature | -10 to $+50\ ^{o}C$ |
| Humidity | max. 95% (no condensation allowed) |
| Baromatic Pressure | 740 to 1050 hPa |
| Dimensions (HxWxL) | 208 mm (H) x 52 mm (W) x155 mm (L) |
| Weight | 350g |

## Radio Specifications

| Radio Output Power | 15 dbm (nominal) | | | |
|---|---|---|---|---|
| Spreading | 11-chip Barker Sequence | | | |
| | Wireless Data Rate | | | |
| Environment | 11 Mb/s | 5.5 Mb/s | 2 Mb/s | 1 Mb/s |
| Range if open[1] | 160 m (525 ft.) | 270 m (885 ft.) | 400 m (1300 ft.) | 550 m (1750 ft.) |
| Range if semi-open[2] | 50 m (165 ft.) | 70 m (230 ft.) | 90 m (300 ft.) | 115 m (375 ft.) |
| Range if closed[3] | 25 m (80 ft.) | 35 m (115 ft.) | 40 m (130 ft.) | 50 m (165 ft.) |
| Modulation technique | DSSS CCK | DSSS CCK | DSSS DQPSK | DSSS DBPSK |
| Receiver Sensitivity (for BER = $10^{-5}$) | -82 dBm | -87 dBm | -91 dBM | -94 dBm |
| Delay Spread (at FER of < 1%) | 65 ns | 225 ns | 400 ns | 500 ns |

1. In Open environments, antennae can "see" each other, i.e. there are no physical obstructions between them.

2. In Semi-open environments, work space is divided by shoulder-height, hollow wall elements, antennas are at desktop level.

3. Closed environments, work space is separated by floor-to-ceiling brick walls.

**NOTE**   The range values provide a rule of thumb and may vary according to the actual conditions at the location where the product will be installed. The range of the wireless signal is related to Transmit Rate of the wireless communication. The range of your wireless devices can be affected when the antennae are placed near metal surfaces and solid high-density materials. Range is also impacted due to "obstacles" in the signal path of the radio that may either absorb or reflect the radio signal.

## Power Adpater Specifications

| Types | AU, UK, US, JP, EU |
|---|---|
| Dimensions (HxMxL) | 78 mm (H) x48 mm (W) x75 mm (L) |
| Input voltage | 100 to 240V +/- 10% |
| Frequency | 47 to 63 Hz |
| Operating temperature | 0 to +50 °C |
| Storage temperature | -20 to + 85 °C |
| Humidity | 20 to 90% |

# Chapter 6 - Regulatory Information

## Part 15 FCC Compliance Statement

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

Operation environment

For Home and Office use

Notice

This equipment has been tested and found to comply with the limits of Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation, if this equipment does cause harmful interference radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

Caution

To comply with the limits for class B digital device according to Part 15 of FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits. All cables used to connect the computers and peripherals must be shielded and grounded. Operation with non-certified/Shielded cables may result in radio/TV interference.

Modification

Any modification not expressly approved by the manufacturer of this device could void the user's authority to operate the device.

## PART 68 FCC Compliance Statement

This equipment complies with Part 68 of the FCC Rules. A label is attached to this equipment that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.

An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is FCC part 68 compliant. Connection to the telephone network should be made by using standard modular telephone jack type RJ11.

The REN is useful to determine the quantity of devices that may be connected to the telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as deter-

mined by the total RENs, contact the telephone company to determine the maximum REN for the calling area.

If this equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications in order to maintain uninterrupted service.

In the event this equipment should fail to operate properly, disconnect the unit from the telephone line. Try using another FCC approved telephone in the same telephone jack. If the trouble persists, call the telephone company repair service bureau. If the trouble does not persist and appear s to be with this unit, disconnect the unit from the telephone line and discontinue use of the unit until it is repaired. Please note that the telephone company may ask that you disconnect the equipment from the telephone network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

The user must use the accessories and cables supplied by the manufacturer to get optimum performance from the product.

No repairs may be done by the customer.

If trouble is experienced with this equipment, please contact your authorized support provider for repair and warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

This equipment cannot be used on telephone company provided coin service. Connection to Party Line Service is subject to state tariffs.

When programming and/or making test calls to emergency numbers:
  • Remain on the line and briefly explain to the dispatcher the reason for the call.
  • Perform such activities in the off-peak hours such as early morning or late evenings.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone facsimile machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine of such business, other entity, or individual.

In order to program this information into your facsimile, refer to your communications software user manual.

## Industry Canada Information

The Industry of Canada label identifies certified equipment. This certification means that the equipment meets the telecommunications network prospective, operational and safety requirements as described in the appropriate Terminal Equipment Technical Requirements document(s). The department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, make sure you are permitted to connect it to the facilities of the local Telecommunications Company. You must install the equipment using an acceptable method of connection. In some cases you may also extend the company's inside wiring for single line individual service by means of certified connector assembly (telephone extension cord). You should be aware, however, that

compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designed by the supplier. Any repairs or alterations made by a user to this equipment or equipment malfunctions, may give the telephone communications company cause to request the user to disconnect the equipment. For your own protection, make sure that the electrical ground connections of the power utility, telephone lines and internal metallic water pipes systems, if present, are connected together. This precaution may be particularly important in rural areas. Caution: Do not attempt to make electrical ground connections yourself, contact the appropriate electric inspection authority or an electrician.

To prevent radio interferance to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum sheilding. Equipment that is installed outdoors is subject licensing.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all devices does not exceed 5.

EMC Notice: This class A/B digital apparatus complies with Canadian ICES-003

## PAN European Regulatory Note

The equipment has been approved under RTTE-Directive. For such product, the following statement is required:

"This equipment has been designed to work with main European countries. Network compatibility is dependent on internal software settings. Contact your vendor if it is necessary to use the equipment on a different telephone network or for further product support contact your support provider on the phone numbers provided in the support warranty documentation provided with the PC.

This equipment has been approved in accordance with Council Decision 98/482/EC for Pan European single terminal connection to the Public Switched Telephone Network (PSTN). However, due to differences between individual PSTNs provided in different countries the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.
In the event of problems, you should contact your equipment supplier in the first instance.

"Dieses Geraet wurde gemaess der Entscheidung 98/482/EG des Rates europaweit zur Anschaltung als einzelne Endeinrichtung an das oeffentliche Fernsprechnetz zugelassen. Aufgrund der zwischen den oeffentlichen Fernsprechnetzen verschiedener Staaten bestehenden Unterschiede Stellt diese Zulassung an sich jedoch keine unbedingte Gewaehr fuer einen erfolgreichen Betrieb des Geraets an jedem Netzabschlusspunkt dar.
Falls beim Betrieb Probleme auftreten, sollten Sie sich zunaechst an ihren Fachhaendler wenden."

"Cet équipement a reçu l'agrément, conformément à la décision 98/482/CE du Conseil, concernant la connexion paneuropéenne de terminal unique aux Réseaux Téléphoniques Publics Commutés (RTPC). Toutefois, comme il existe des différences d'un pays à l'autre entre les RTPC, l'agrément en soi ne constitue pas une garantie absolue de fonctionnement optimal à chaque point de terminaison du réseau RTPC. En cas de problème, vous devez contacter en premier lieu votre fournisseur."

"La presente apparecchiatura terminale è stata approvata in conformità della decione 98/482/CE del Consigho per la connessione panaeuropea come terminale singolo ad una reteanalogica PSTN. A causa delle differenze tra le reti dei differenti paesi, l'approvazione non garantisce però di per sé il funzionamento coretto in tutti punti di terminazione di rete PSTN.
In caso di problemi contattare in primo luogo il fornitore del prodotto."

"Este equipo ha sido homologado de conformidad con la Decisión 98/482/CE del Consejo para la conexión panaeuropea de un terminal simple a la red telefónica pública commutada (RTPC). No obstante, a la vista de la diferencias que existen entre las RTPC que se ofrecen en diferentes países, la homologación no constituye por si sola una garantia in condicional de funcionamiento satisfactorio en todos los puntos de terminación de la red de una RTPC.
En caso de surgir algún problema, procede ponerse en contacto en primer lugar el proveedor de equipo."

"Dit apparaat is goedgekeurd volgens Beschikking 98/482/EG van de Raad voor de pan-europese aansluiting van enkelvoudige eindapparatuur op het openbare geschakelde telefoonnetwerk (PSTN). Gezien de verschillen tussen de individuele PSTN's in de verschillende landen, biedt deze goedkeuring op zichzelf geen onvoorwaardelijke garantie voor een succesvolle werking op elk PSTN-netwerkaansluit-

punt.
Neem bij problemen in eerste instantie contact op met de leverancier van het apparaat."

Network Compatibility Declaration

This product is designed to interwork with the Public Switched Telecommunication Networks in UK, Ireland, Netherlands, Sweden, Denmark, Finland, Switzerland, Luxembourg, Belgium, France, Germany, Spain, Portugal, Iceland, Greece, Italy, Norway and Austria.

CE 0122 ①
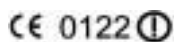
## Notice for Japan

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると受信障害を引き起こすことがあります。
取り扱い説明書に従って正しい取り扱いをして下さい。

NEW ZEALAND TELECOM WARNINGS

General

"The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermited equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services."

"This equipment does not fully meet Telecom's impedance requirements. Performance limitations may occur when used in conjunction with some parts of the network. Telecom will accept no responsibility should difficulties arise in such circumstances."

"This equipment shall not be set up to make automatic calls to the Telecom '111' Emergency Service."

"If a charge for local calls is unacceptable, the 'Dial' button should NOT be used for local calls. Only the 7-digits of the local number should be dialled from your telephone. DO NOT dial the area code digit or the '0' prefix."

"This equipment may not provide for the effective hand-over of a call to another device connected to the same line."

Important Notice

"Under power failure conditions, this telephone may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use."

"Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specification:-

1
   a    There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and

   b    The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

2    Where automatic calls are made to different numbers, the equipment shall go on-line for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.

3    The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing."

"All persons using this device for recording telephone conversations shall comply with the New Zealand law. This requires that at least one party to the conversation is to be aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act 1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is used and what is disclosed to any other party."

# Hardware Warranty

This HP accessory is covered by a limited hardware warranty for a period of one year from the date of purchase by the original end-user. The type of service provided is return to an HP or repair-authorized reseller service-center.

At Hewlett-Packard's discretion, a defective accessory will be repaired or replaced by a new unit, either of the same type or of an equivalent model.

If this accessory is purchased and used together with an HP Brio, HP e-pc, HP Vectra personal computer or an HP Kayak PC Workstation, it will be covered by the warranty of this computer or workstation, under the same conditions of service and duration.

Please, refer to the warranty statement provided with your HP personal computer or PC workstation for warranty limitations, customer responsibilities and other terms and conditions.

FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

# HP Software Warranty

THIS WARRANTY STATEMENT TAKES PRECEDENCE OVER ANY OTHER SOFTWARE WARRANTY STATEMENT INCLUDED WITH THIS PRODUCT

Ninety-Day Limited Software Warranty

HP warrants for a period of NINETY (90) DAYS from the date of the purchase that the software product will execute its programming instructions when all files are properly installed. HP does not warrant that the software will be uninterrupted or error free. HP does not warrant to the performance of usefulness of any software provided with your computer product. Unless otherwise expressly provided by HP, it is your own responsibility to obtain the latest version of any software and support directly from the software owner or authorized distributor. In the event that this software product fails to execute its programming instructions during the warranty period, Customer's remedy shall be a refund or repair. Should HP be unable to replace the media within a reasonable amount of time, Customer's alternate remedy shall be a refund of the purchase price upon return of the product and all copies

Removable Media (If supplied)

HP warrants the removable media, if supplied, upon which this product is recorded to be free from defects in materials and workmanship under normal use for a period of NINETY (90) DAYS from the date of purchase. In the event the media proves to be defective during the warranty period, Customer's remedy shall be to return the media to HP for replacement. Should HP be unable to replace the media within a reasonable amount of time, Customer's alternate remedy shall be a refund of the purchase price upon return of the product and destruction of all other nonremovable media copies of the software product.

Notice of Warranty Claims

Customer must notify HP in writing of any warranty claim not later than thirty (30) days after the expiration of the warranty period.

The above warranty shall not apply to defects resulting from: misuse; unauthorized modification; operation or storage outside the environmental specifications for the product; in-transit damage; improper maintenance; or defects resulting from use of non-HP software, accessories, media, supplies, consumables, or such items not designed for use with the product.

HP MAKES NO OTHER EXPRESS WARRANTY, WHETHER WRITTEN OR ORAL WITH RESPECT TO THIS PRODUCT. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY SET FORTH ABOVE. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS OR EXCLUSION MAY NOT APPLY TO YOU.

Limitation of Liability and Remedies

THE REMEDIES PROVIDED ABOVE ARE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL HP BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFIT) WHETHER BASED ON WARRANTY, CONTRACT, TORT OR ANY OTHER LEGAL THEORY. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

# HP Software License Agreement

CAREFULLY READ THIS LICENSE AGREEMENT BEFORE PROCEEDING TO OPERATE THE HP ACCESSORY. RIGHTS IN THE SOFTWARE ARE OFFERED ONLY ON THE CONDITION THAT THE CUSTOMER AGREES TO ALL TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT. PROCEEDING TO INSTALLING AND USING THE ACCESSORY INDICATES YOUR ACCEPTANCE OF THESE TERMS AND CONDITIONS. IF YOU DO NOT AGREE TO THE LICENSE AGREEMENT, YOU MUST NOW DESTROY ANY MASTER DISKETTES OR CD-ROMS, OR RETURN THE COMPLETE ACCESSORY AND SOFTWARE FOR A FULL REFUND.

UNLESS OTHERWISE STATED BELOW, THIS HP SOFTWARE PRODUCT LICENSE AGREEMENT SHALL GOVERN THE USE OF ALL SOFTWARE THAT IS PROVIDED TO YOU, THE CUSTOMER, AS PART OF THE HP ACCESSORY. IT SHALL SUPERSEDE ANY NON-HP SOFTWARE LICENSE TERMS THAT MAY BE FOUND ON-LINE, OR IN ANY DOCUMENTATION OR OTHER MATERIALS CONTAINED IN THE ACCESSORY PRODUCT PACKAGING.

Note: Operating System Software by Microsoft is licensed to you under the Microsoft End User License Agreement (EULA) contained in the Microsoft documentation.

The following License Terms govern the use of the software:

USE. Customer may use the software on any one computer. Customer may not network the software or otherwise use it on more than one computer. Customer may not reverse assemble or decompile the software unless authorized by law.

COPIES AND ADAPTATIONS. Customer may make copies or adaptations of the software (a) for archival purposes or (b) when copying or adaptation is an essential step in the use of the software with a computer so long as the copies and adaptations are used in no other manner.

OWNERSHIP. Customer agrees that he/she does not have any title or ownership of the software, other than ownership of the physical media. Customer acknowledges and agrees that the software is copyrighted and protected under the copyright laws. Customer acknowledges and agrees that the software may have been developed by a third party software supplier named in the copyright notices included with the software, who shall be authorized to hold the Customer responsible for any copyright infringement or violation of this Agreement.

TRANSFER OF RIGHTS IN SOFTWARE. Customer may transfer rights in the software to a third party only as part of the transfer of all rights and only if Customer obtains the prior agreement of the third party to be bound by the terms of this License Agreement. Upon such a transfer, Customer agrees that his/her rights in the software are terminated and that he/she will either destroy his/her copies and adaptations or deliver them to the third party.

SUBLICENSING AND DISTRIBUTION. Customer may not lease, sublicense thesoftware or distribute copies or adaptations of the software to anyone in physical media or by telecommunication without the prior written consent of Hewlett-Packard.

TERMINATION. Hewlett-Packard may terminate this software license for failure to comply with any of these terms provided Hewlett-Packard has requested Customer to cure the failure and Customer has failed to do so within thirty (30) days of such notice.

UPDATES AND UPGRADES. Customer agrees that the software does not include updates and upgrades which may be available from Hewlett-Packard under a separate support agreement.

EXPORT CLAUSE. Customer agrees not to export or re-export the software or any copy or adaptation in violation of the U.S. Export Administration regulations or other applicable regulation.

U.S. GOVERNMENT RESTRICTED RIGHTS. Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013. Hewlett-Packard Company. 3000 Hanover Street, Palo Alto, CA 94304 U.S.A. Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

(9 Nov 1998)

## DECLARATION OF CONFORMITY

### According to ISO/IEC Guide 22 and CEN/CENELEC EN 45014

**Manufacturer's name:** HEWLETT-PACKARD France
**Manufacturer's address:** 5 Avenue Raymond Chanas-Eybens
38053 GRENOBLE Cedex 09 - FRANCE

**Declares that the product(s):**
**Product Name** HP 802.11b Wireless LAN Access Point
(if applicable, add: **Product Options**)
**Model Number(s)** P1981A
**Conform(s) to the following Product Specifications:**

SAFETY
- International: IEC 60950:1991 +A1 +A2 +A3+A4 / GB4943- 1995
- Europe: EN 60950:1992 +A1 +A2 +A3 +A4 + A11

ELECTROMAGNETIC COMPATABILITY
- CISPR 22:1993+A1+A2/ EN 55022:1994+A1+A2 Class B
- CISPR24: 1997 / EN55024 :1998
- IEC 61000-3-3:1994 / EN 61000-3-3:1995
- FCC Title 47 CFR, Part 15 Class B
- ICES-003, Issue 3
- VCCI-B
- AS/NZ 3548:1995

TELECOM : Equipment Class 2 . Compliant with:
- RTTE 1999/5/EEC
- FCC part 68
- CS-03
- ACA TS002-1997
- HKTA2011
- IDA TS PSTN1
- CETELEC

Products bearing the CE marking (2) also comply with:
•IEC 61000-3-2:1995 / EN 61000-3-2:1995.
**Those products comply with the requirements of the following Directives and carry the CE-marking accordingly: EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC, both amended by the Directive 93/68/EEC. The product complies with the R&TTE Directive 1999/5/EC (Annex IV).**

1) This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

    (1) This device may not cause harmful interference , and
    (2) This device must accept any interference received, including interference that may cause undesired
       operation

2) All products sold in the European Economic Area (EEA) bear the CE marking

**Grenoble**

25th October 2000                  Didier CABARET
                                       Quality Manager

European contact for regulatory topics only: Hewlett-Packard GmbH, HQ-TRE, Herrenberger Strasse
                                         13071034 Boeblingen, Germany

**hp**

i n v e n t

P1981-90027